DOCUMENT RESUME

ED 160 889 08 CE 018 388

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TITLE Job Title Analysis for Selected Job Titles in Horticulture. Final Report.
INSTITUTION Purdue Univ., Lafayette, Ind.
SPONS AGENCY Indiana State Board of Vocational and Technical Education, Indianapolis.; Office of Education (DHEW), Washington, D.C.
NOTE 68p.; Not available in hard copy due to faint print in original document

EDRS PRICE MF-$0.83 Plus Postage. HC Not Available from EDRS.
DESCRIPTORS Agricultural Education; *Curriculum Development; *Job Skills; *Landscaping; Occupational Surveys; Ornamental Horticulture; *Ornamental Horticulture Occupations; State Surveys; *Task Analysis; *Validity
IDENTIFIERS Indiana; *V TECS Catalogs

ABSTRACT

The systematic development of horticulture curriculum for Indiana was the focus of this research project which validated a job task list for use in instructional material development. The job title catalog, A Landscape Gardener, was selected from those currently available through the Vocational-Technical Consortium of States (V-TECS) program. A purposive study as outlined in the V-TECS technical reference handbook was undertaken to validate this job title catalog for Indiana. Survey instruments were sent to job incumbent personnel in horticulture businesses and data from twenty returned surveys was tabulated and analyzed. From the selected list of 165, job incumbents selected 109 as those most commonly performed, also indicating tools commonly used and amount of time spent at various tasks. Finally the validated list of tasks contained in the job title catalog were sequenced to facilitate further work in instructional materials development. (Survey instruments and survey data are included in the appendixes.) (JH)

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ED160889

Final Report

Job Title Analysis for Selected Job Titles in Horticulture

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Project No. 77-7-C-1

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NATIONAL INSTITUTE OF EDUCATION

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CE 018 388

Information Sheet

A. Kind of Project (check one)

1_____Experimental	4_____Demonstration
2 XX Developmental	5_____Evaluative
3_____Pilot	6_____Exemplary

TYPE	NUMBERS
A. Disadvantaged	A.
B. Handicapped	B
C. Migrant	C
D. Minority	D
E. Combination of the above	E 250
F. Other_____	F

GROUP	
1. Pre-school	1
2. Elementary	2
3. Junior High School	3
4. Middle School	4
5. Senior High School	5 250
6. Postsecondary	6
7. Adult	7
8. University	8
9. Employer	9
10. Employee	10
11. Citizens	11
12. Parents	12
13. Combinations of the above	13

LOCALITY	
a. National	a
b. State	b XX
c. Region	c
d. District	d
e. County	e
f. Area	f
g. Community	g
h. School Corporation	h

STATEMENT OF OBJECTIVES

The objectives of this project are as follows:

A. Select one job title catalog from those that currently exist in vocational horticulture that is available through the V-TECs program.

B. Validate the tasks contained in the job title using a purposive study as outlined in the V-TECs technical reference handbook.

C. Survey job incumbent personnel in horticulture as a secondary validation of the job title catalog.

D. Sequence the tasks that are validated into a systematic arrangement to facilitate further work in instructional materials development.

STATEMENT OF THE PROBLEM

Development of curriculum in vocational agriculture has lacked a systematic approach in Indiana. Current emphasis in V-TECs has motivated curriculum developers in vocational agriculture to begin the task of systematic curriculum development. The purpose of this research project is to begin systematic curriculum development in horticulture. A single job title catalog was selected from those currently available through the V-TECs system. A purposive study was undertaken to validate this job title catalog for Indiana. Finally, the validated list of tasks contained in the job title catalog were sequenced to allow for the systematic development of instructional materials.

PRIORITY AREA

The project was designed for RFP priority area #1, "Job Title Analysis Curriculum Development". The purpose was the revision of an existing curriculum and/or materials, or original development of a curriculum and/or materials related to a specific job title. Clearly,

the project proposed herein is within the description of this RFP.

PROCEDURES

General Design of the Study

The study was conducted to meet the purpose of conducting the purposive study to validate the job title "A Landscape Gardener". The specific procedures are as follows:

1. The working committee was selected by Agriculture Education Staff to include university level horticulture specialists, agricultural education staff members at Purdue University, State Department of Public Instruction, Division of Vocational Education-Agribusiness personnel, and teachers of vocational horticulture.
2. The working committee purged the task list using the criteria listed in "Task Analysis for Performance Based Vocational Education". Other responsibilities included revising and approving the survey instrument that had been prepared by the research staff using the V-TECS Technical Reference Handbook format and to assist in preparation of a list of Job Incumbent Personnel who would receive the survey instrument.
3. Surveys were sent to job incumbent personnel selected from an earlier survey sent to horticulture businesses. (See instrument in Appendix A).
4. The survey data was tabulated and analyzed permitting a sequential arrangement of the tasks. The task arrangement will facilitate future instructional material development efforts to be utilized in writing instructional materials in a systematic and sequential order for use by vocational instructors.

ANALYSIS PROCEDURES

Determination of tools used, tasks performed and time spent on each task was conducted by using the V-TECS Program Survey Data Analysis system. This system was used to summarize data from twenty surveys returned. Specifically subprogram frequencies calculated frequency counts, mean relative percent time spent and stanines.

FINDINGS

The original task list from the V-TECS catalog for Gardening Groundskeeping consisted of 215 tasks. The working committee purged the list and provided some additional tasks to total 165 to be included in the task inventory.

The task inventory has been assembled under the following duty groups:

A. Organizing and Planning - All tasks that refer to managerial responsibilities.

B. Directing and Implementing - The tasks that are related to supervision and record keeping are included in this duty category.

C. Inspecting and Evaluating - Filing, work records, reports, and evaluation are tasks that are included in this group.

D. Training - To provide guidance and instruction for employees.

E. Maintaining Plants - This group refers to all activities that the Landscape Gardener would be involved with in plant care.

F. Preparing and Improving the Soil - The tasks used for seedbed preparations, soil nutrients considerations, and soil erosion control were listed in this category.

G. Constructing and Maintaining Facilities - Tasks that involve working with structures that are included as part of the requirements of

the landscaping work were listed in this group.

H. Operating Equipment - All tasks that refer to machinery and other equipment operation are included in this duty group.

I. Maintaining Equipment - All the equipment used in the landscaping business requires maintenance, therefore, the tasks related to maintenance were formed as one duty group.

The tasks as listed in the duty groups were then assembled with a list of tools that are used on the job and placed in a survey instrument to be sent to job incumbents.

The job incumbents then selected 109 tasks as those most commonly performed on the job. They also indicated what tools are commonly used on the job. The incumbent workers provided information as to how much time was spent working at various tasks.

The final task list information with stanine values has been provided in the appendix of this final report.

EVALUATION

The working committee provided formative and summative evaluation of tasks through the purging activities and the final review of the task list.

Formative evaluation was also provided by job incumbents by indicating in the survey instrument what tasks were currently being performed by the time spent performing the tasks, and the types of tools used. The findings of the evaluation are provided by a listing of the tasks in duty groups with stanine values provided for the tasks identified (See appendix to report).

CONCLUSIONS AND RECOMMENDATIONS

The project provided a list of validated tasks used in the Landscaping industry in Indiana. The tasks will provide the guidelines for preparing learning experiences for students preparing for occupations in the Landscaping area.

It is recommended that the validated tasks be analyzed and broken down into smaller units of work (subtasks). The learning content can then be determined from the subtasks and limits of content be established. This procedure will allow for development of instructional learning materials for use in vocational horticulture programs.

BUDGET

The budget will be forwarded to complete this final report as soon as it is available from the Purdue University Contracts office.

APPENDICES

Survey Instrument Sent to Job Incumbent Personnel
for Validation of Tasks

BACKGROUND INFORMATION

Please print information requested and check applicable boxes.

Date	THIS SPACE FOR OFFICE USE ONLY	Case Control No. 15-52
	O. E. No. 1.0504	D. O. T. No.

Name (Last, Middle Initial, First)

Address (Street, City, State, Zip Code)

Social Security Account Number ☐☐☐ ☐☐ ☐☐☐☐

Work Telephone Number ☐☐☐ ☐☐☐☐

Total Months in Present Job ☐☐☐

Total Months in Career Field ☐☐☐

Total Months at Present Location ☐☐☐

Number of People Supervised ☐☐

Name of Firm or Employer

Employer's Address (Street, City, State)

Your Present Position (or Job Title)

Circle the Highest Education Level (or GED Equivalent) You Have Completed

	Elementary				*High School*				*College*				*Graduate*		*Date of Completion*
Grade	05	06	07	08	09	10	11	12	13	14	15	16	17	18	

BACKGROUND INFORMATION (Cont.)

Check the Tools and Equipment You Use In Your Current Assignment

(1)_____ Aerators
(2)_____ Axe or hatchet
(3)_____ Back hoe
(4)_____ Belts, slings, and ropes
(5)_____ Block and tackle
(6)_____ Can shears
(7)_____ Chain saw
(8)_____ Chemical masks
(9)_____ Climbing hooks
(10)_____ Come-along
(11)_____ Cultivator
(12)_____ Disc
(13)_____ Disc-harrow
(14)_____ Fertilizer applicator
(15)_____ File
(16)_____ Front end loader
(17)_____ Grader blade
(18)_____ Grafting and budding knife and chisel
(19)_____ Hammer and maul
(20)_____ Harrow
(21)_____ Hedge shears
(22)_____ Herbicide applicator
(23)_____ Hoe
(24)_____ Irrigation equipment
(25)_____ Jack
(26)_____ Ladder
(27)_____ Lawn roller
(28)_____ Lawn sprinkler
(29)_____ Mallet
(30)_____ Metal hose extension with water breaker head
(31)_____ Mower
(32)_____ Pesticide applicator
(33)_____ Plow
(34)_____ Pole pruner
(35)_____ Portable cement mixer
(36)_____ Post-hole digger
(37)_____ Power edger
(38)_____ Power rake
(39)_____ Pruning knife
(40)_____ Pumps
(41)_____ Rakes
(42)_____ Roller
(43)_____ Rotary hoe
(44)_____ Rotary tiller
(45)_____ Rule or tape
(46)_____ Saw, orchard
(47)_____ Saw, pruning
(48)_____ Saw, pole
(49)_____ Saw, tapered
(50)_____ Seed applicator
(51)_____ Shear, hedge
(52)_____ Shear, lopping
(53)_____ Shear, pruning
(54)_____ Shovels
(55)_____ Small hand cultivators and hoes
(56)_____ Sod-cutting machine
(57)_____ Sod plugger
(58)_____ Soil probe or auger
(59)_____ Soil shredder
(60)_____ Soil testing kit
(61)_____ Spading forks
(62)_____ Tractor
(63_____ Truck
(64)_____ Vac-sweep
(65)_____ Weed and grass cutter
(66)_____ Welding machine
(67)_____ Weeder
(68)_____ Wheel-barrow
(69)_____ Wire stretcher
(70)_____ Wrenches

STOP! READ THIS PAGE BEFORE GOING FURTHER

Have you completed the *Background Information* section? Make sure before you continue with this procedure.

Procedure A — Checking Tasks of Present Job

1. As you read each task in the *Duty-Task* section, pages 1 through 11, place a check (✓) beside each task that you perform in your present job. Put your checkmark in the column headed "Check - If Done in Present Job."

2. DO NOT COMPLETE THE RIGHT-HAND COLUMN AT THIS TIME.

3. If a task that you perform is not listed anywhere in the entire list, write it in the blank space at the end of each series of tasks.

4. Do not confuse work you do yourself with work you supervise.

5. Remember, at this time you are to complete ONLY the column headed "Check - If Done in Present Job " for pages 1 through 11. Now, turn to page 1 and BEGIN.

Procedure B — Rating Time Spent on Tasks on Present Job

1. Have you checked each task that you perform in your present job? Make sure before you continue with this procedure.

2. Now you are to rate the relative amount of time you spend performing each task in your present job. Relative time spent means the total time you spend doing the task compared with the time you spend on each of the other tasks of your present job.

3. Use a rating of "1" if you spend "very much below average" amount of time on a task. Use a rating of "2" for "below average" time; and so on, up to a rating of "7" if you spend "very much above average" amount of time on the task.

4. Remember, you are to rate ONLY tasks that you have already checked in the first column of pages 1 through 11.

5. Place your rating, according to the 7-point scale, in the right-hand column, headed "Time Spent Doing Task on Present Job."

6. When you have completed all your ratings in the right-hand column of pages 1 through 11, you will have completed this Job Inventory, and you may turn it in.

7. Now turn to page 1 and BEGIN your rating for the right-hand column.

JOB INVENTORY (DUTY-TASK LIST)

DIRECTIONS:

1. Check tasks you do in your present job.
2. Add any tasks you do in present job which are not listed.
3. In the "Time Spent Doing Task on Present Job" column, rate the checked tasks according to the time you spend performing each task in present job using the "Time Spent Scale" below.

Time Spent Scale

1 - very much below average
2 - below average
3 - slightly below average
4 - about average
5 - slightly above average
6 - above average
7 - very much above average

A. ORGANIZING AND PLANNING		check if done in present job	time spent doing these tasks in present job
1. Develop job descriptions for employees.	1.*		
2. Assign personnel to duty positions.	2.		
3. Establish work performance standards.	3.		
4. Determine work priorities.	4.		
5. Schedule leaves or vacations.	5.		
6. Plan purchasing program for supplies needed.	6.		
7. Arranging for transportation of materials purchased.	7.		
8. Plan equipment maintenance schedule.	8.		
9. Arrange for equipment repair.	9.		
10. Plan safety programs.	10.		
11. Plan security programs.	11.		
12. Develop fertilization schedules for turf.	12.		

*Cumulative task numbers.

JOB INVENTORY (DUTY-TASK LIST)

A. ORGANIZING AND PLANNING (Cont.)		check if done in present job	time spent doing these tasks in present job
13. Develop fertilization schedules for trees and shrubs.	13.*		
14. Develop fertilization schedules for flowers.	14.		
NOTE: If any task you perform under this duty is not listed, write it in the blank space below.			
B. DIRECTING AND IMPLEMENTING			
1. Supervise employees for specific tasks.	1.		
2. Develop or improve work methods or procedures.	2.		
3. Interview and select employees.	3.		
4. Participate in staff meetings.	4.		
5. Pay accounts payable and collect accounts receivable.	5.		
6. Keep records of receipts and expenses.	6.		
7. Post safety precautions.	7.		
8. Prepare and pay income tax or other government reports and taxes.	8.		
9. Prepare employee payroll.	9.		
10. Enforce safety regulations.	10.		
NOTE: If any task you perform under this duty is not listed, write it in the blank space below.			

*Cumulative task numbers.

JOB INVENTORY (DUTY-TASK LIST)

C. INSPECTING AND EVALUATING		check if done in present job	time spent doing these tasks in present job
1. Keep employee work records.	1.*		
2. Conduct employee performance evaluation.	2.		
3. Conduct inventories of plants, supplies, and equipment.	3.		
4. Keep annual depreciation schedule.	4.		
5. File accident reports.	5.		
6. Write insurance claims for damaged equipment.	6.		
NOTE: If any task you perform under this duty is not listed, write it in the blank space below.			
D. TRAINING			
1. Conduct on-the-job training.	1.		
2. Demonstrate how to locate technical information.	2.		
3. Demonstrate use of equipment or tools.	3.		
4. Write training reports.	4.		
NOTE: If any task you perform under this duty is not listed, write it in the blank space below.			

*Cumulative task numbers.

JOB INVENTORY (DUTY-TASK LIST)

E. MAINTAINING PLANTS		check if done in present job	time spent doing these tasks in present job
1. Add mulch to protect new seedlings.	1.*		
2. Add mulch to control weeds.	2.		
3. Inspect plants for insects and diseases.	3.		
4. Apply chemicals to control insects.	4.		
5. Apply chemicals to control disease.	5.		
6. Apply foliar spray.	6.		
7. Apply protective substance to tree wounds or cut surfaces.	7.		
8. Brace overloaded limbs or branches.	8.		
9. Cultivate plants and flower beds.	9.		
10. Girdle trees.	10.		
11. Mow lawns.	11.		
12. Trim and edge lawns.	12.		
13. Plant annual flowers.	13.		
14. Set bulbs.	14.		
15. Protect plants from weather.	15.		
16. Prune and train vines.	16.		
17. Prune and trim trees or shrubs.	17.		
18. Prune dead flowers.	18.		

*Cumulative task numbers.

JOB INVENTORY (DUTY-TASK LIST)

E. MAINTAINING PLANTS (Cont.)		check if done in present job	time spent doing these tasks in present job
19. Remove dead or unwanted trees or shrubs.	19.*		
20. Remove stumps.	20.		
21. Repair worn spots in lawn with sod.	21.		
22. Repair worn spots in lawn by reseeding.	22.		
23. Reseed lawn.	23.		
24. Support woody plants by guying, staking, or babling.	24.		
25. Thin and weed plants.	25.		
26. Train plants and shrubs.	26.		
27. Transplant trees or shrubs.	27.		
28. Treat cavities in trees.	28.		
29. Treat nutrient deficiencies in plants.	29.		
30. Treat tree or plant troubles caused by cultural factors (i.e., mechanical or chemical damage).	30.		
31. Water plants and lawns.	31.		
NOTE: If any task you perform under this duty is not listed, write it in the blank space below.			

*Cumulative task numbers.

JOB INVENTORY (DUTY-TASK LIST)

F. PREPARING AND IMPROVING SOIL		check if done in present job	time spent doing these tasks in present job
1. Aerate soil.	1.*		
2. Apply fertilizer with hose proportioner.	2.		
3. Apply fertilizer with root feeder.	3.		
4. Apply dry fertilizer.	4.		
5. Apply lime according to soil test.	5.		
6. Take a soil sample.	6.		
7. Determine amount of fertilizer to apply from soil test results.	7.		
8. Apply liquid chemicals to control weeds.	8.		
9. Apply dry chemicals to control weeds.	9.		
10. Apply liquid chemicals to control soil insects.	10.		
11. Apply dry chemicals to control soil insects.	11.		
12. Apply liquid chemicals to control soil diseases.	12.		
13. Apply dry chemicals to control soil diseases.	13.		
14. Spread topsoil.	14.		
15. Apply organic matter.	15.		
16. Prepare seedbed for lawn.	16.		
17. Prepare seedbed for ornamental plants.	17.		

*Cumulative task numbers.

JOB INVENTORY (DUTY-TASK LIST)

F. PREPARING AND IMPROVING SOIL (Cont.)		check if done in present job	time spent doing these tasks in present job
18. Prepare seedbed for vegetable garden.	18.*		
19. Replace topsoil.	19.		
20. Install structures to control soil erosion.	20.		
21. Apply mulch to control soil erosion.	21.		
22. Install plant materials to control soil erosion.	22.		
23. Fill in sinkholes or depressions in lawns.	23.		
24. Establish grades (slope).	24.		
NOTE: If any task you perform under this duty is not listed, write it in the blank space below.			
G. CONSTRUCTING AND MAINTAINING FACILITIES			
1. Apply salt to icy sidewalks or streets.	1.		
2. Clean drainage ditches and/or culverts.	2.		
3. Clean grounds of leaves and/or litter.	3.		
4. Clean restrooms.	4.		
5. Clean walks, walls, patios or other stone structures.	5.		
6. Construct and/or maintain bird baths.	6.		

*Cumulative task numbers.

JOB INVENTORY (DUTY-TASK LIST)

G. CONSTRUCTING AND MAINTAINING FACILITIES (Cont.)		check if done in present job	time spent doing these tasks in present job
7. Construct and/or maintain plant growing structures.	7.*		
8. Construct compost bin.	8.		
9. Construct fences.	9.		
10. Dig drainage ditches.	10.		
11. Drain and clean pools.	11.		
12. Plan lighting.	12.		
13. Maintain lighting.	13.		
14. Paint fences and/or outbuildings.	14.		
15. Paint lawn and garden furniture.	15.		
16. Paint lines on parking lots, streets and recreational surfaces.	16.		
17. Install signs.	17.		
18. Repair driveways.	18.		
19. Repair sidewalks.	19.		
20. Repair fences.	20.		
21. Repair walls.	21.		
22. Repair patio and lawn furniture.	22.		
23. Clean patio and lawn furniture.	23.		

*Cumulative task numbers.

JOB INVENTORY (DUTY-TASK LIST)

G. CONSTRUCTING AND MAINTAINING FACILITIES (Cont.)		check if done in present job	time spent doing these tasks in present job
24. Repair playground equipment.	24.*		
25. Set stones.	25.		
26. Sweep streets or parking lots.	26.		
NOTE: If any task you perform under this duty is not listed, write it in the blank space below.			
H. OPERATING EQUIPMENT			
1. Calibrate dry applicators.	1.		
2. Calibrate liquid or slurry (fertilizer) applicators.	2.		
3. Operate back hoe (or front end loader).	3.		
4. Operate front end loader.	4.		
5. Operate cultivator.	5.		
6. Operate drill seeder.	6.		
7. Operate hand seeder.	7.		
8. Operate pick-up truck.	8.		
9. Operate power edger.	9.		
10. Operate rotary tiller.	10.		

*Cumulative task numbers.

JOB INVENTORY (DUTY-TASK LIST)

H. OPERATING EQUIPMENT (Cont.)		check if done in present job	time spent doing these tasks in present job
11. Operate sickle bar mower.	11.*		
12. Operate soil grinding equipment.	12.		
13. Operate tractor.	13.		
14. Operate vacuum rake.	14.		
15. Operate wagon box seeder.	15.		
16. Operate gas welder.	16.		
17. Operate electric welder.	17.		
18. Select (and use) correct hand tools and power equipment.	18.		
19. Operate reel type mower.	19.		
20. Operate push type rotary mower.	20.		
21. Operate tractor attached rotary mower.	21.		
22. Operate self propelled mowers.	22.		
23. Operate aeration equipment.	23.		
24. Operate thatching equipment.	24.		
25. Transfer liquid or slurry fertilizer from nurse tank to applicator.	25.		
26. Operate snow plow.	26.		
27. Operate snow blower.	27.		

*Cumulative task numbers.

JOB INVENTORY (DUTY-TASK LIST)

H. OPERATING EQUIPMENT (Cont.)		check if done in present job	time spent doing these tasks in present job
28. Adjust automatic timing system.	28.*		
29. Use hand tools.	29.		
30. Use lawn rollers.	30.		
31. Operate post hole digger.	31.		
NOTE: If any task you perform under this duty is not listed, write it in the blank space below.			
I. MAINTAINING EQUIPMENT			
1. Cleaning power equipment.	1.		
2. Change oil in power equipment.	2.		
3. Change or clean air filter in power equipment.	3.		
4. Grease power equipment.	4.		
5. Clean hand tools.	5.		
6. Inspect and repair hand tools.	6.		
7. Clean fertilizer applicators.	7.		
8. Inspect and repair dry pesticide equipment.	8.		
9. Clean irrigation equipment.	9.		
10. Inspect and repair irrigation equipment.	10.		

*Cumulative task numbers.

JOB INVENTORY (DUTY-TASK LIST)

I. MAINTAINING EQUIPMENT (Cont.)		check if done in present job	time spent doing these tasks in present job
11. Inspect and repair power equipment.	11.*		
12. Store flammable chemicals.	12.		
13. Clean dry pesticide equipment.	13.		
14. Inspect and repair dry pesticide equipment.	14.		
15. Clean liquid pesticide equipment.	15.		
16. Inspect and repair liquid pesticide equipment.	16.		
17. Paint equipment.	17.		
18. Service and repair small engines up to 20 horsepower.	18.		
19. Service and repair engines over 20 horsepower.	19.		
NOTE: If any task you perform under this duty is not listed, write it in the blank space below.			

*Cumulative task numbers.

APPENDICES

Survey Data from Job Incumbent Personnel

1. Time Spent Index
2. DOT Differential Time Spent
3. Standard Deviation of Values - Time Spent
4. Duties and Tasks
5. Tools used by Respondents (Expressed as Means)

SOUTHERN ASSOCIATION OF COLLEGES AND SCHOOLS
COMMISSION ON OCCUPATIONAL EDUCATION INSTITUTIONS
VOCATIONAL-TECHNICAL EDUCATION CONSORTIUM OF STATES

TIME SPENT INDEX I

PROJECT # 8888 SURVEY DATA ANALYSIS
OCCUPATIONAL INVENTORY FOR PURPOSIVE STUDY - PURDUE UNIVERSITY

ALL MONTHS EXPERIENCE

DOT	DOT DESCRIPTION	NUMBER RESPONDING
407181010	D.O.T. 1	18
COCOCOOOO		0
COCOCOCOO		0
OOCOOOCOO		0
UOCOCOOOO		0

DUTY	DUTY DESCRIPTION
A	ORGANIZING AND PLANNING
B	DIRECTING AND IMPLEMENTING
C	INSPECTING AND EVALUATING
D	TRAINING
E	MAINTAINING PLANTS
F	PREPARING AND IMPROVING SOIL
G	CONSTRUCTING AND MAINTAINING FACILITIES
H	OPERATING EQUIPMENT
I	MAINTAINING EQUIPMENT

D	TSK	TASK DESCRIPTION	NUMBER OF MEMBERS PERFORMING	PERCENT OF MEMBERS PERFORMING	AVERAGE PERCENT TIME SPENT BY MEMBERS PERFORMING	AVERAGE PERCENT TIME SPENT BY ALL MEMBERS	CUMULATIVE SUM OF AVERAGE PERCENT TIME SPENT BY ALL MEMBERS	STANINE FOR TIME SPENT ALL MEMBERS
A	03	ESTABLISH WORK PERFORMANCE STANDARDS	14	77.777	2.556	1.989	1.989	9
B	02	DEVELOP OR IMPROVE WORK METHODS OR PROCEDURES	16	88.888	2.123	1.888	3.877	9
A	04	DETERMINE WORK PRIORITIES	14	77.777	2.390	1.859	5.736	9
H	08	OPERATE PICKUP TRUCK	14	77.777	2.096	1.630	7.366	9
A	02	ASSIGN PERSONNEL TO DUTY POSITIONS	14	77.777	2.067	1.608	8.974	9
B	01	SUPERVISE EMPLOYEES FOR SPECIFIC TASKS	13	72.222	1.994	1.440	10.414	9
H	29	USE HAND TOOLS	15	83.333	1.706	1.422	11.836	8
F	04	APPLY DRY FERTILIZER	16	88.888	1.537	1.367	13.203	8
B	04	PARTICIPATE IN STAFF MEETINGS	11	61.111	2.198	1.343	14.546	8
A	09	ARRANGE FOR EQUIPMENT REPAIR	12	66.666	1.960	1.307	15.853	8
H	10	OPERATE ROTARY TILLER	14	77.777	1.585	1.233	17.086	8
E	03	INSPECT PLANTS FOR INSECTS AND DISEASES	12	66.666	1.834	1.223	18.309	8
A	08	PLAN EQUIPMENT MAINTENANCE SCHEDULE	11	61.111	1.984	1.213	19.522	8
C	03	CONDUCT INVENTORIES OF PLANTS& SUPPLIES& AND EQUIPMENT	11	61.111	1.927	1.178	20.700	8
I	05	CLEAN HAND TOOLS	16	88.888	1.324	1.178	21.878	8
A	07	ARRANGING FOR TRANSPORTATION OF MATERIALS PURCHASED	8	44.444	2.637	1.172	23.050	8
A	06	PLAN PURCHASING PROGRAM FOR SUPPLIES NEEDED	10	55.555	2.088	1.160	24.210	8
B	03	INTERVIEW AND SELECT EMPLOYEES	9	50.000	2.283	1.142	25.352	8
E	04	APPLY CHEMICALS TO CONTROL INSECTS	13	72.222	1.563	1.129	26.481	7
D	01	CONDUCT ON THE JOB TRAINING	12	66.666	1.669	1.113	27.594	7
H	26	OPERATE SNOW PLOW	9	50.000	2.215	1.108	28.702	7
E	27	TRANSPLANT TREES OR SHRUBS	13	72.222	1.526	1.102	29.804	7
E	05	APPLY CHEMICALS TO CONTROL DISEASE	13	72.222	1.507	1.089	30.893	7
C	02	CONDUCT EMPLOYEE PERFORMANCE EVALUATION	8	44.444	2.406	1.070	31.963	7
D	03	DEMONSTRATE USE OF EQUIPMENT OR TOOLS	13	72.222	1.476	1.066	33.029	7
H	13	OPERATE TRACTOR	13	72.222	1.441	1.041	34.070	7
I	06	INSPECT AND REPAIR HAND TOOLS	14	77.777	1.332	1.037	35.107	7
E	19	REMOVE DEAD OR UNWANTED TREES OR SHRUBS	14	77.777	1.329	1.034	36.141	7
F	14	SPREAD TOPSOIL	12	66.666	1.506	1.004	37.145	7
I	04	GREASE POWER EQUIPMENT	13	72.222	1.351	0.976	38.121	7

D	TSK	TASK DESCRIPTION	NUMBER OF MEMBERS PERFORMING	PERCENT OF MEMBERS PERFORMING	AVERAGE PERCENT TIME SPENT BY MEMBERS PERFORMING	AVERAGE PERCENT TIME SPENT BY ALL MEMBERS	CUMULATIVE SUM OF AVERAGE PERCENT TIME SPENT BY ALL MEMBERS	STANINE FOR TIME SPENT ALL MEMBERS
F	17	PREPARE SEEDBED FOR ORNAMENTAL PLANTS	11	61.111	1.563	0.956	39.077	7
E	17	PRUNE AND TRIM TREES OR SHRUBS	13	72.222	1.318	0.952	40.029	7
I	02	CHANGE OIL IN POWER EQUIPMENT	13	72.222	1.308	0.945	40.974	7
A	01	DEVELOP JOB DESCRIPTIONS FOR EMPLOYEES	10	55.555	1.665	0.925	41.899	7
I	03	CHANGE OR CLEAN AIR FILTER IN POWER EQUIPMENT	13	72.222	1.224	0.884	42.783	7
E	31	WATER PLANTS AND LAWNS	13	72.222	1.223	0.883	43.666	7
F	16	PREPARE SEEDBED FOR LAWN	12	66.666	1.314	0.876	44.542	7
I	07	CLEAN FERTILIZER APPLICATORS	14	77.777	1.124	0.875	45.417	6
E	06	APPLY FOLIAR SPRAY	12	66.666	1.309	0.873	46.290	6
F	08	APPLY LIQUID CHEMICALS TO CONTROL WEEDS	13	72.222	1.201	0.868	47.158	6
F	06	TAKE A SOIL SAMPLE	8	44.444	1.917	0.852	48.010	6
H	18	SELECT %AND USE< CORRECT HAND TOOLS AND POWER EQUIPMENT	10	55.555	1.526	0.848	48.858	6
E	07	APPLY PROTECTIVE SUBSTANCE TO TREE WOUNDS OR CUT SURFACES	13	72.222	1.159	0.837	49.695	6
A	05	SCHEDULE LEAVES OR VACATIONS	7	38.888	2.143	0.834	50.529	6
E	02	ADD MULCH TO CONTROL WEEDS	12	66.666	1.241	0.828	51.357	6
A	10	DEVELOP FERTILIZATION SCHEDULES FOR TREES AND SHRUBS	10	55.555	1.475	0.820	52.177	6
E	11	MOW LAWNS	10	55.555	1.446	0.804	52.981	6
F	22	INSTALL PLANT MATERIALS TO CONTROL SOIL EROSION	11	61.111	1.306	0.798	53.779	6
I	11	INSPECT AND REPAIR POWER EQUIPMENT	13	72.222	1.102	0.796	54.575	6
I	15	CLEAN LIQUID PESTICIDE EQUIPMENT	11	61.111	1.302	0.796	55.371	6
D	04	WRITE TRAINING REPORTS	3	16.666	4.708	0.785	56.156	6
I	08	INSPECT AND REPAIR DRY PESTICIDE EQUIPMENT	12	66.666	1.149	0.766	56.922	6
B	06	KEEP RECORDS OF RECEIPTS AND EXPENSES	9	50.000	1.512	0.756	57.678	6
H	04	OPERATE FRONT END LOADER	11	61.111	1.233	0.754	58.432	6
F	09	APPLY DRY CHEMICALS TO CONTROL WEEDS	11	61.111	1.195	0.731	59.163	6
I	10	INSPECT AND REPAIR IRRIGATION EQUIPMENT	7	38.888	1.836	0.714	59.877	6
E	29	TREAT NUTRIENT DEFICIENCIES IN PLANTS	10	55.555	1.280	0.711	60.588	6
E	12	TRIM AND EDGE LAWNS	9	50.000	1.404	0.702	61.290	6
E	30	TREAT TREE OR PLANT TROUBLES CAUSED BY CULTURAL FACTORS	11	61.111	1.147	0.701	61.991	6
F	24	ESTABLISH GRADES %SLOPE<	11	61.111	1.143	0.699	62.690	6
F	05	APPLY LIME ACCORDING TO SOIL TEST	9	50.000	1.378	0.689	63.379	6
I	01	CLEANING POWER EQUIPMENT	10	55.555	1.221	0.678	64.057	6
I	12	STORE FLAMMABLE CHEMICALS	8	44.444	1.513	0.672	64.729	6
F	21	APPLY MULCH TO CONTROL SOIL EROSION	11	61.111	1.095	0.669	65.398	6

D--TSK	TASK DESCRIPTION	NUMBER OF MEMBERS PERFORMING	PERCENT OF MEMBERS PERFORMING	AVERAGE PERCENT TIME SPENT BY MEMBERS PERFORMING	AVERAGE PERCENT TIME SPENT BY ALL MEMBERS	CUMULATIVE SUM OF AVERAGE PERCENT TIME SPENT BY ALL MEMBERS	STANINE FOR TIME SPENT ALL MEMBERS
H C7	OPERATE HAND SEEDER	10	55.555	1.196	0.665	66.063	5
I 16	INSPECT AND REPAIR LIQUID PESTICIDE EQUIPMENT	10	55.555	1.197	0.665	66.728	5
H 20	OPERATE PUSH TYPE ROTARY MOWER	12	66.666	0.995	0.664	67.392	5
E 01	ADD MULCH TO PROTECT NEW SEEDLINGS	8	44.444	1.473	0.655	68.047	5
C 04	KEEP ANNUAL DEPRECIATION SCHEDULE	3	16.666	3.930	0.655	68.702	5
C 01	KEEP EMPLOYEE WORK RECORDS	6	33.333	1.947	0.649	69.351	5
A 12	DEVELOP FERTILIZATION SCHEDULES FOR TURF	7	38.888	1.644	0.639	69.990	5
I 14	INSPECT AND REPAIR DRY PESTICIDE EQUIPMENT	9	50.000	1.277	0.639	70.629	5
E 24	SUPPORT WOODY PLANTS BY GUYING& STAKING& OR CABLING	10	55.555	1.130	0.628	71.257	5
F 15	APPLY ORGANIC MATTER	10	55.555	1.125	0.625	71.882	5
E 13	PLANT ANNUAL FLOWERS	12	66.666	0.927	0.619	72.501	5
I 13	CLEAN DRY PESTICIDE EQUIPMENT	10	55.555	1.114	0.619	73.120	5
B 05	PAY ACCOUNTS PAYABLE AND COLLECT ACCOUNTS RECEIVABLE	5	27.777	2.222	0.617	73.737	5
E 18	PRUNE DEAD FLOWERS	9	50.000	1.231	0.616	74.353	5
E 15	PROTECT PLANTS FROM WEATHER	10	55.555	1.064	0.591	74.944	5
F 10	APPLY LIQUID CHEMICALS TO CONTROL SOIL INSECTS	10	55.555	1.050	0.584	75.528	5
F 12	APPLY LIQUID CHEMICALS TO CONTROL SOIL DISEASES	10	55.555	1.048	0.583	76.111	5
G 25	SET STONES	10	55.555	1.050	0.583	76.694	5
E 09	CULTIVATE PLANTS AND FLOWER BEDS	10	55.555	1.041	0.579	77.273	5
I 18	SERVICE AND REPAIR SMALL ENGINES UP TO 20 HORSEPOWER	10	55.555	1.023	0.569	77.842	5
H 01	CALIBRATE DRY APPLICATORS	11	61.111	0.900	0.550	78.392	5
I 17	PAINT EQUIPMENT	9	50.000	1.063	0.532	78.924	5
H 21	OPERATE TRACTOR ATTACHED ROTARY MOWER	11	61.111	0.864	0.528	79.452	5
E 25	THIN AND WEED PLANTS	9	50.000	1.053	0.527	79.979	5
H C3	OPERATE BACK HOE &OR FRONT END LOADER<	8	44.444	1.174	0.522	80.501	5
G 07	CONSTRUCT AND/RO MAINTAIN PLANT GROWING STRUCTURES	9	50.000	1.038	0.519	81.020	5
G 01	APPLY SALT TO ICY SIDEWALKS OR STREETS	6	33.333	1.515	0.505	81.525	5
E 23	RESEED LAWN	9	50.000	1.009	0.505	82.030	5
I 09	CLEAN IRRIGATION EQUIPMENT	6	33.333	1.506	0.502	82.532	5
A 10	PLAN SAFETY PROGRAMS	5	27.777	1.772	0.492	83.024	5
F 23	FILL IN SINKHOLES OR DEPRESSIONS IN LAWNS	11	61.111	0.803	0.491	83.515	5
E 21	REPAIR WORN SPOTS IN LAWN WITH SOD	9	50.000	0.[illegible]	0.488	84.003	5

D	TSK	TASK DESCRIPTION	NUMBER OF MEMBERS PERFORMING	PERCENT OF MEMBERS PERFORMING	AVERAGE PERCENT TIME SPENT BY MEMBERS PERFORMING	AVERAGE PERCENT TIME SPENT BY ALL MEMBERS	CUMULATIVE SUM OF AVERAGE PERCENT TIME SPENT BY ALL MEMBERS	STANINE FOR TIME SPENT ALL MEMBERS
E	22	REPAIR WORN SPOTS IN LAWN BY RESEEDING	9	50.000	0.976	0.488	84.491	4
H	24	OPERATE THATCHING EQUIPMENT	9	50.000	0.967	0.484	84.975	4
H	31	OPERATE POST HOLE DIGGER	9	50.000	0.957	0.479	85.454	4
G	03	CLEAN GROUNDS OF LEAVES AND/OR LETTER	8	44.444	1.075	0.478	85.932	4
H	22	OPERATE SELF PROPELLED MOWERS	8	44.444	1.070	0.476	86.408	4
A	11	PLAN SECURITY PROGRAMS	6	33.333	1.412	0.471	86.879	4
H	05	OPERATE CULTIVATOR	8	44.444	1.030	0.458	87.337	4
F	07	DETERMINE AMOUNT OF FERTILIAER TO APPLY FROM SOIL TEST RESULTS	5	27.777	1.626	0.452	87.789	4
F	13	APPLY DRY CHEMICALS TO CONTROL SOIL DISEASES	9	50.000	0.900	0.450	88.239	4
F	11	APPLY DRY CHEMICALS TO CONTROL SOIL INSECTS	8	44.444	0.975	0.434	88.673	4
F	03	APPLY FERTILIZER WITH ROOT FEEDER	9	50.000	0.868	0.434	89.107	4
A	14	DEVELOP FERTILIZATION SCHEDULES FOR FLOWERS	6	33.333	1.295	0.432	89.539	4
B	10	ENFORCE SAFETY REGULATIONS	8	44.444	0.931	0.414	89.953	4
D	02	DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	6	33.333	1.240	0.413	90.366	4
F	19	REPLACE TOPSOIL	8	44.444	0.867	0.385	90.751	4
H	02	CALIBRATE LIQUID OR SLURRY %FERTILIZER< APPLICATORS	7	38.888	0.985	0.383	91.134	4
E	14	SET BULBS	8	44.444	0.823	0.366	91.500	4
H	30	USE LAWN ROLLERS	8	44.444	0.809	0.360	91.860	4
B	09	PREPARE EMPLOYEE PAYROLL	2	11.111	3.152	0.350	92.210	4
F	20	INSTALL STRUCTURES TO CONTROL SOIL EROSION	7	38.888	0.878	0.342	92.552	4
F	02	APPLY FERTILIZER WITH HOSE PROPORTIONER	6	33.333	1.023	0.341	92.893	4
G	05	CLEAN WALKS,WALLS,PATIOS OR OTHER STONE STRUCTURES	6	33.333	1.001	0.334	93.227	4
B	08	PREPARE AND PAY INCOME TAX OR OTHER GOVERNMENT REPORTS AND TAXES	3	16.666	1.912	0.319	93.546	4
C	06	WRITE INSURANCE CLAIMS FOR DAMAGED EQUIPMENT	4	22.222	1.427	0.317	93.863	4
E	16	PRUNE AND TRAIN VINES	8	44.444	0.703	0.313	94.176	4
H	12	OPERATE SOIL GRINDING EQUIPMENT	4	22.222	1.375	0.306	94.482	4
C	05	FILE ACCIDENT REPORTS	4	22.222	1.281	0.285	94.767	4
H	09	OPERATE POWER EDGER	5	27.777	0.944	0.262	95.029	4
E	08	BRACE OVERLOADED LIMBS OR BRANCHES	5	27.777	0.906	0.252	95.281	4
E	26	TRAIN PLANTS AND SHRUBS	6	33.333	0.725	0.242	95.523	4
H	14	OPERATE VACUUM RAKE	5	27.777	0.855	0.238	95.761	4
H	23	OPERATE AERATION EQUIPMENT	6	33.333	0.705	0.235	95.996	4
E	28	TREAT CAVITIES IN TREES	5	27.777	0.836	0.232	96.228	4
B	07	POST SAFETY PRECAUTIONS	4	22.222	1.017	0.226	96.454	4

D	TSK	TASK DESCRIPTION	STANINE FOR TIME SPENT ALL MEMBERS	CUMULATIVE SUM OF AVERAGE PERCENT TIME SPENT BY ALL MEMBERS	AVERAGE PERCENT TIME SPENT BY ALL MEMBERS	AVERAGE PERCENT TIME SPENT BY MEMBERS PERFORMING	PERCENT OF MEMBERS PERFORMING	NUMBER OF MEMBERS PERFORMING
G	12	PLAN LIGHTING	3	16.666	1.308	0.218	96.672	3
F	01	AERATE SOIL	6	33.333	0.578	0.193	96.865	3
G	17	INSTALL SIGNS	3	16.666	1.128	0.188	97.053	3
H	17	OPERATE ELECTRIC WELDER	4	22.222	0.836	0.186	97.239	3
E	20	REMOVE STUMPS	6	33.333	0.555	0.185	97.424	3
I	19	SERVICE AND REPAIR ENGINES OVER 20 HORSEPOWER	5	27.777	0.626	0.174	97.598	3
H	06	OPERATE DRILL SEEDER	3	16.666	1.018	0.170	97.768	3
G	04	CLEAN RESTROOMS	4	22.222	0.757	0.168	97.936	3
H	19	OPERATE REEL TYPE MOWER	3	16.666	0.964	0.161	98.097	3
G	10	DIG DRAINAGE DITCHES	5	27.777	0.577	0.160	98.257	3
F	18	PREPARE SEEDBED FOR VEGETABLE GARDEN	5	27.777	0.542	0.151	98.408	3
G	02	CLEAN DRAINAGE DITCHES AND/OR CULVERTS	2	11.111	1.315	0.146	98.554	3
G	26	SWEEP STREETS OR PARKING LOTS	3	16.666	0.826	0.138	98.692	2
G	21	REPAIR WALLS	3	16.666	0.819	0.137	98.829	2
G	09	CONSTRUCT FENCES	3	16.666	0.807	0.135	98.964	2
H	27	OPERATE SNOW BLOWER	2	11.111	1.217	0.135	99.099	2
G	18	REPAIR DRIVEWAYS	3	16.666	0.650	0.108	99.207	2
G	14	PAINT FENCES AND/OR OUTBUILDINGS	3	16.666	0.632	0.105	99.312	2
E	10	GIRDLE TREES	2	11.111	0.940	0.104	99.416	2
G	20	REPAIR FENCES	4	22.222	0.450	0.100	99.516	2
G	06	CONSTRUCT AND/OR AMINTAIN BIRD BATHS	1	5.555	1.550	0.086	99.602	2
H	16	OPERATE GAS WELDER	2	11.111	0.671	0.075	99.677	2
G	11	DRAIN AND CLEAN POOLS	2	11.111	0.607	0.067	99.744	2
G	16	PAINT LINES ON PARKING LOTS& STREETS AND RECREATIONAL SURFACES	1	5.555	0.884	0.049	99.793	2
H	28	ADJUST AUTOMATIC TIMING SYSTEM	1	5.555	0.884	0.049	99.842	1
H	15	OPERATE WAGON BOX SEEDER	1	5.555	0.857	0.048	99.890	1
G	13	MAINTAIN LIGHTING	2	11.111	0.341	0.038	99.928	1
G	08	CONSTRUCT COMPOST BIN	1	5.555	0.574	0.032	99.960	1
G	19	REPAIR SIDEWALKS	1	5.555	0.330	0.018	99.978	1
G	15	PAINT LAWN AND GARDEN FURNITURE	1	5.555	0.303	0.017	99.995	1

D--TSK	TASK DESCRIPTION	NUMBER OF MEMBERS PERFORMING	PERCENT OF MEMBERS PERFORMING	AVERAGE PERCENT TIME SPENT BY MEMBERS PERFORMING	AVERAGE PERCENT TIME SPENT BY ALL MEMBERS	CUMULATIVE SUM OF AVERAGE PERCENT TIME SPENT BY ALL MEMBERS	STANINE FOR TIME SPENT ALL MEMBERS

SOUTHERN ASSOCIATION OF COLLEGES AND SCHOOLS
COMMISSION ON OCCUPATIONAL EDUCATION INSTITUTIONS
VOCATIONAL-TECHNICAL EDUCATION CONSORTIUM OF STATES

DOT DIFFERENTIAL TIME SPENT #2

PROJECT # 8888 SURVEY DATA ANALYSIS
OCCUPATIONAL INVENTORY FOR PURPOSIVE STUDY - PURDUE UNIVERSITY

DOT	DOT DESCRIPTION
407181010	D.O.T. 1
COCOCOOOO	
COCOCOOOO	
OOCOOOOOO	
OOCOCOOOO	

DUTY	DUTY DESCRIPTION
A	ORGANIZING AND PLANNING
B	DIRECTING AND IMPLEMENTING
C	INSPECTING AND EVALUATING
D	TRAINING
E	MAINTAINING PLANTS
F	PREPARING AND IMPROVING SOIL
G	CONSTRUCTING AND MAINTAINING FACILITIES
H	OPERATING EQUIPMENT
I	MAINTAINING EQUIPMENT

D--TSK		TASK DESCRIPTION	DIFFERENCE BETWEEN DOT"S (A MINUS B)..... DOT-B 000000000 PERCENT MEMBERS PERFORMING..... DOT-A 407181010 PERCENT MEMBERS PERFORMING.....		
B	02	DEVELOP OR IMPROVE WORK METHODS OR PROCEDURES	88.888	0.000	88.888
I	05	CLEAN HAND TOOLS	88.888	0.000	88.888
F	04	APPLY DRY FERTILIZER	88.888	0.000	88.888
H	29	USE HAND TOOLS	83.333	0.000	83.333
I	06	INSPECT AND REPAIR HAND TOOLS	77.777	0.000	77.777
I	07	CLEAN FERTILIZER APPLICATORS	77.777	0.000	77.777
H	10	OPERATE ROTARY TILLER	77.777	0.000	77.777
H	08	OPERATE PICKUP TRUCK	77.777	0.000	77.777
A	04	DETERMINE WORK PRIORITIES	77.777	0.000	77.777
A	03	ESTABLISH WORK PERFORMANCE STANDARDS	77.777	0.000	77.777
A	02	ASSIGN PERSONNEL TO DUTY POSITIONS	77.777	0.000	77.777
E	19	REMOVE DEAD OR UNWANTED TREES OR SHRUBS	77.777	0.000	77.777
E	17	PRUNE AND TRIM TREES OR SHRUBS	72.222	0.000	72.222
E	07	APPLY PROTECTIVE SUBSTANCE TO TREE WOUNDS OR CUT SURFACES	72.222	0.000	72.222
E	05	APPLY CHEMICALS TO CONTROL DISEASE	72.222	0.000	72.222
E	04	APPLY CHEMICALS TO CONTROL INSECTS	72.222	0.000	72.222
D	03	DEMONSTRATE USE OF EQUIPMENT OR TOOLS	72.222	0.000	72.222
B	01	SUPERVISE EMPLOYEES FOR SPECIFIC TASKS	72.222	0.000	72.222
F	08	APPLY LIQUID CHEMICALS TO CONTROL WEEDS	72.222	0.000	72.222
E	31	WATER PLANTS AND LAWNS	72.222	0.000	72.222
E	27	TRANSPLANT TREES OR SHRUBS	72.222	0.000	72.222
H	13	OPERATE TRACTOR	72.222	0.000	72.222
I	04	GREASE POWER EQUIPMENT	72.222	0.000	72.222
I	03	CHANGE OR CLEAN AIR FILTER IN POWER EQUIPMENT	72.222	0.000	72.222
I	02	CHANGE OIL IN POWER EQUIPMENT	72.222	0.000	72.222
I	11	INSPECT AND REPAIR POWER EQUIPMENT	72.222	0.000	72.222
I	08	INSPECT AND REPAIR DRY PESTICIDE EQUIPMENT	66.666	0.000	66.666
H	20	OPERATE PUSH TYPE ROTARY MOWER	66.666	0.000	66.666
F	16	PREPARE SEEDBED FOR LAWN	66.666	0.000	66.666
F	14	SPREAD TOPSOIL	66.666	0.000	66.666
A	09	ARRANGE FOR EQUIPMENT REPAIR	66.666	0.000	66.666
E	02	ADD MULCH TO CONTROL WEEDS	66.666	0.000	66.666
D	01	CONDUCT ON THE JOB TRAINING	66.666	0.000	66.666
E	03	INSPECT PLANTS FOR INSECTS AND DISEASES	66.666	0.000	66.666
E	06	APPLY FOLIAR SPRAY	66.666	0.000	66.666
E	13	PLANT ANNUAL FLOWERS	66.666	0.000	66.666
A	08	PLAN EQUIPMENT MAINTENANCE SCHEDULE	61.111	0.000	61.111
B	04	PARTICIPATE IN STAFF MEETINGS	61.111	0.000	61.111
C	03	CONDUCT INVENTORIES OF PLANTS& SUPPLIES& AND EQUIPMENT	61.111	0.000	61.111
F	17	PREPARE SEEDBED FOR ORNAMENTAL PLANTS	61.111	0.000	61.111

DIFFERENCE BETWEEN DOT"S (A MINUS B).....
DOT-B 000000000 PERCENT MEMBERS PERFORMING.....
DOT-A 407181010 PERCENT MEMBERS PERFORMING.....

D	TSK	TASK DESCRIPTION			
F	24	ESTABLISH GRADES %SLOPE<	61.111	0.000	61.111
F	23	FILL IN SINKHOLES OR DEPRESSIONS IN LAWNS	61.111	0.000	61.111
F	22	INSTALL PLANT MATERIALS TO CONTROL SOIL EROSION	61.111	0.000	61.111
F	21	APPLY MULCH TO CONTROL SOIL EROSION	61.111	0.000	61.111
E	30	TREAT TREE OR PLANT TROUBLES CAUSED BY CULTURAL FACTORS	61.111	0.000	61.111
F	09	APPLY DRY CHEMICALS TO CONTROL WEEDS	61.111	0.000	61.111
H	04	OPERATE FRONT END LOADER	61.111	0.000	61.111
H	01	CALIBRATE DRY APPLICATORS	61.111	0.000	61.111
H	21	OPERATE TRACTOR ATTACHED ROTARY MOWER	61.111	0.000	61.111
I	15	CLEAN LIQUID PESTICIDE EQUIPMENT	55.555	0.000	55.555
I	16	INSPECT AND REPAIR LIQUID PESTICIDE EQUIPMENT	55.555	0.000	55.555
I	18	SERVICE AND REPAIR SMALL ENGINES UP TO 20 HORSEPOWER	55.555	0.000	55.555
I	13	CLEAN DRY PESTICIDE EQUIPMENT	55.555	0.000	55.555
H	18	SELECT %AND USE< CORRECT HAND TOOLS AND POWER EQUIPMENT	55.555	0.000	55.555
I	01	CLEANING POWER EQUIPMENT	55.555	0.000	55.555
G	25	SET STONES	55.555	0.000	55.555
H	07	OPERATE HAND SEEDER	55.555	0.000	55.555
F	10	APPLY LIQUID CHEMICALS TO CONTROL SOIL INSECTS	55.555	0.000	55.555
E	29	TREAT NUTRIENT DEFICIENCIES IN PLANTS	55.555	0.000	55.555
F	15	APPLY ORGANIC MATTER	55.555	0.000	55.555
F	12	APPLY LIQUID CHEMICALS TO CONTROL SOIL DISEASES	55.555	0.000	55.555
A	10	DEVELOP FERTILIZATION SCHEDULES FOR TREES AND SHRUBS	55.555	0.000	55.555
A	06	PLAN PURCHASING PROGRAM FOR SUPPLIES NEEDED	55.555	0.000	55.555
A	01	DEVELOP JOB DESCRIPTIONS FOR EMPLOYEES	55.555	0.000	55.555
E	11	MOW LAWNS	55.555	0.000	55.555
E	15	PROTECT PLANTS FROM WEATHER	55.555	0.000	55.555
F	24	SUPPORT WOODY PLANTS BY GUYING8 STAKING8 OR CABLING	55.555	0.000	55.555
E	09	CULTIVATE PLANTS AND FLOWER BEDS	50.000	0.000	50.000
E	23	RESEED LAWN	50.000	0.000	50.000
E	25	THIN AND WEED PLANTS	50.000	0.000	50.000
E	22	REPAIR WORN SPOTS IN LAWN BY RESEEDING	50.000	0.000	50.000
E	21	REPAIR WORN SPOTS IN LAWN WITH SOD	50.000	0.000	50.000
E	18	PRUNE DEAD FLOWERS	50.000	0.000	50.000
E	12	TRIM AND EDGE LAWNS	50.000	0.000	50.000
B	03	INTERVIEW AND SELECT EMPLOYEES	50.000	0.000	50.000
B	06	KEEP RECORDS OF RECEIPTS AND EXPENSES	50.000	0.000	50.000
F	13	APPLY DRY CHEMICALS TO CONTROL SOIL DISEASES	50.000	0.000	50.000
F	03	APPLY FERTILIZER WITH ROOT FEEDER	50.000	0.000	50.000
F	05	APPLY LIME ACCORDING TO SOIL TEST	50.000	0.000	50.000
G	07	CONSTRUCT AND/RO MAINTAIN PLANT GROWING STRUCTURES	50.000	0.000	50.000

DIFFERENCE BETWEEN DOT"S (A MINUS B).....
DOT-B 000000000 PERCENT MEMBERS PERFORMING.....
DOT-A 407181010 PERCENT MEMBERS PERFORMING.....

D	TSK	TASK DESCRIPTION			
H	31	OPERATE POST HOLE DIGGER	50.000	0.000	50.000
H	26	OPERATE SNOW PLOW	50.000	0.000	50.000
H	24	OPERATE THATCHING EQUIPMENT	50.000	0.000	50.000
I	14	INSPECT AND REPAIR DRY PESTICIDE EQUIPMENT	50.000	0.000	50.000
I	17	PAINT EQUIPMENT	50.000	0.000	50.000
I	12	STORE FLAMMABLE CHEMICALS	44.444	0.000	44.444
H	22	OPERATE SELF PROPELLED MOWERS	44.444	0.000	44.444
H	30	USE LAWN ROLLERS	44.444	0.000	44.444
H	05	OPERATE CULTIVATOR	44.444	0.000	44.444
H	03	OPERATE BACK HOE %OR FRONT END LOADER<	44.444	0.000	44.444
F	06	TAKE A SOIL SAMPLE	44.444	0.000	44.444
F	11	APPLY DRY CHEMICALS TO CONTROL SOIL INSECTS	44.444	0.000	44.444
F	19	REPLACE TOPSOIL	44.444	0.000	44.444
G	03	CLEAN GROUNDS OF LEAVES AND/OR LETTER	44.444	0.000	44.444
C	02	CONDUCT EMPLOYEE PERFORMANCE EVALUATION	44.444	0.000	44.444
B	10	ENFORCE SAFETY REGULATIONS	44.444	0.000	44.444
A	07	ARRANGE FOR TRANSPORTATION OF MATERIALS PURCHASED	44.444	0.000	44.444
E	14	SET BULBS	44.444	0.000	44.444
E	16	PRUNE AND TRAIN VINES	44.444	0.000	44.444
E	01	ADD MULCH TO PROTECT NEW SEEDLINGS	38.888	0.000	38.888
A	05	SCHEDULE LEAVES OR VACATIONS	38.888	0.000	38.888
A	12	DEVELOP FERTILIZATION SCHEDULES FOR TURF	38.888	0.000	38.888
F	20	INSTALL STRUCTURES TO CONTROL SOIL EROSION	38.888	0.000	38.888
H	02	CALIBRATE LIQUID OR SLURRY %FERTILIZER< APPLICATORS	38.888	0.000	38.888
I	10	INSPECT AND REPAIR IRRIGATION EQUIPMENT	33.333	0.000	33.333
I	09	CLEAN IRRIGATION EQUIPMENT	33.333	0.000	33.333
H	23	OPERATE AERATION EQUIPMENT	33.333	0.000	33.333
G	05	CLEAN WALKS,WALLS,PATIOS OR OTHER STONE STRUCTURES	33.333	0.000	33.333
G	01	APPLY SALT TO ICY SIDEWALKS OR STREETS	33.333	0.000	33.333
F	02	APPLY FERTILIZER WITH HOSE PROPORTIONER	33.333	0.000	33.333
F	01	AERATE SOIL	33.333	0.000	33.333
A	11	PLAN SECURITY PROGRAMS	33.333	0.000	33.333
C	01	KEEP EMPLOYEE WORK RECORDS	33.333	0.000	33.333
A	14	DEVELOP FERTILIZATION SCHEDULES FOR FLOWERS	33.333	0.000	33.333
D	02	DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	33.333	0.000	33.333
E	20	REMOVE STUMPS	33.333	0.000	33.333
E	26	TRAIN PLANTS AND SHRUBS	27.777	0.000	27.777
E	08	BRACE OVERLOADED LIMBS OR BRANCHES	27.777	0.000	27.777
B	05	PAY ACCOUNTS PAYABLE AND COLLECT ACCOUNTS RECEIVABLE	27.777	0.000	27.777
A	10	PLAN SAFETY PROGRAMS			

DIFFERENCE BETWEEN DOT"S (A MINUS B).....
DOT-B 000000000 PERCENT MEMBERS PERFORMING.....
DOT-A 407181010 PERCENT MEMBERS PERFORMING.....

D	--TSK	TASK DESCRIPTION	.	.	.
E	28	TREAT CAVITIES IN TREES	27.777	0.000	27.777
F	07	DETERMINE AMOUNT OF FERTILIAER TO APPLY FROM SOIL TEST RESULTS	27.777	0.000	27.777
F	18	PREPARE SEEDBED FOR VEGETABLE GARDEN	27.777	0.000	27.777
G	10	DIG DRAINAGE DITCHES	27.777	0.000	27.777
H	09	OPERATE POWER EDGER	27.777	0.000	27.777
H	14	OPERATE VACUUM RAKE	27.777	0.000	27.777
I	19	SERVICE AND REPAIR ENGINES OVER 20 HORSEPOWER	27.777	0.000	27.777
H	17	OPERATE ELECTRIC WELDER	22.222	0.000	22.222
H	12	OPERATE SOIL GRINDING EQUIPMENT	22.222	0.000	22.222
G	20	REPAIR FENCES	22.222	0.000	22.222
G	04	CLEAN RESTROOMS	22.222	0.000	22.222
B	07	POST SAFETY PRECAUTIONS	22.222	0.000	22.222
C	06	WRITE INSURANCE CLAIMS FOR DAMAGED EQUIPMENT	22.222	0.000	22.222
C	05	FILE ACCIDENT REPORTS	22.222	0.000	22.222
D	04	WRITE TRAINING REPORTS	16.666	0.000	16.666
B	08	PREPARE AND PAY INCOME TAX OR OTHER GOVERNMENT REPORTS AND TAXES	16.666	0.000	16.666
C	04	KEEP ANNUAL DEPRECIATION SCHEDULE	16.666	0.000	16.666
G	09	CONSTRUCT FENCES	16.666	0.000	16.666
G	18	REPAIR DRIVEWAYS	16.666	0.000	16.666
G	17	INSTALL SIGNS	16.666	0.000	16.666
G	14	PAINT FENCES AND/OR OUTBUILDINGS	16.666	0.000	16.666
G	12	PLAN LIGHTING	16.666	0.000	16.666
G	21	REPAIR WALLS	16.666	0.000	16.666
G	26	SWEEP STREETS OR PARKING LOTS	16.666	0.000	16.666
H	06	OPERATE DRILL SEEDER	16.666	0.000	16.666
H	19	OPERATE REEL TYPE MOWER	16.666	0.000	16.666
H	16	OPERATE GAS WELDER	11.111	0.000	11.111
H	27	OPERATE SNOW BLOWER	11.111	0.000	11.111
G	13	MAINTAIN LIGHTING	11.111	0.000	11.111
G	11	DRAIN AND CLEAN POOLS	11.111	0.000	11.111
G	02	CLEAN DRAINAGE DITCHES AND/OR CULVERTS	11.111	0.000	11.111
B	09	PREPARE EMPLOYEE PAYROLL	11.111	0.000	11.111
E	10	GIRDLE TREES	11.111	0.000	11.111
G	08	CONSTRUCT COMPOST BIN	5.555	0.000	5.555
G	06	CONSTRUCT AND/OR AMINTAIN BIRD BATHS	5.555	0.000	5.555
G	15	PAINT LAWN AND GARDEN FURNITURE	5.555	0.000	5.555
G	16	PAINT LINES ON PARKING LOTS8 STREETS AND RECREATIONAL SURFACES	5.555	0.000	5.555
G	19	REPAIR SIDEWALKS	5.555	0.000	5.555
H	28	ADJUST AUTOMATIC TIMING SYSTEM	5.555	0.000	5.555
H	15	OPERATE WAGON BOX SEEDER	5.555	0.000	5.555

DIFFERENCE BETWEEN DOT"S (A MINUS B).....
DOT-B 000000000 PERCENT MEMBERS PERFORMING.....
DOT-A 407181010 PERCENT MEMBERS PERFORMING.....

D	TSK	TASK DESCRIPTION			
H	11	OPERATE SICKLE BAR MOWER	0.000	0.000	0.000
H	25	TRANSFER LIQUID OR SLURRY FERTILIZER FROM NURSE TANK TO APPLICATOR	0.000	0.000	0.000
G	24	REPAIR PLAYGROUND EQUIPMENT	0.000	0.000	0.000
G	23	CLEAN PATIO AND LAWN FURNITURE	0.000	0.000	0.000
G	22	REPAIR PATIO AND LAWN FURNITURE	0.000	0.000	0.000

SOUTHERN ASSOCIATION OF COLLEGES AND SCHOOLS
COMMISSION ON OCCUPATIONAL EDUCATION INSTITUTIONS
VOCATIONAL-TECHNICAL EDUCATION CONSORTIUM OF STATES

STANDARD DEVIATION OF VALUES - TIME-SPENT #3

PROJECT# 8888 SURVEY DATA ANALYSIS
OCCUPATIONAL INVENTORY FOR PURPOSIVE STUDY - PURDUE UNIVERSITY

OCT	DOT DESCRIPTION
407181010	D.O.T. 1
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00C000C00	
00C000000	
00C000000	

CUTY	DUTY DESCRIPTION
A	ORGANIZING AND PLANNING
B	DIRECTING AND IMPLEMENTING
C	INSPECTING AND EVALUATING
D	TRAINING
E	MAINTAINING PLANTS
F	PREPARING AND IMPROVING SOIL
G	CONSTRUCTING AND MAINTAINING FACILITIES
H	OPERATING EQUIPMENT
I	MAINTAINING EQUIPMENT

D	TSK	TASK DESCRIPTION	SEQUENCE NUMBER	NUMBER PERFORMING	AVERAGE VALUE FOR THOSE PERFORMING	STANDARD DEVIATION OF VALUES FOR THOSE PERFORMING
H	25	TRANSFER LIQUID OR SLURRY FERTILIZER FROM NURSE TANK TO APPLICATOR	1	0	0.00	0.00
H	11	OPERATE SICKLE BAR MOWER	2	0	0.00	0.00
G	24	REPAIR PLAYGROUND EQUIPMENT	3	0	0.00	0.00
G	23	CLEAN PATIO AND LAWN FURNITURE	4	0	0.00	0.00
G	22	REPAIR PATIO AND LAWN FURNITURE	5	0	0.00	0.00
G	19	REPAIR SIDEWALKS	6	1	1.00	0.00
G	16	PAINT LINES ON PARKING LOTS& STREETS AND RECREATIONAL SURFACES	7	1	1.00	0.00
G	15	PAINT LAWN AND GARDEN FURNITURE	8	1	1.00	0.00
G	13	MAINTAIN LIGHTING	9	2	1.00	0.00
G	11	DRAIN AND CLEAN POOLS	10	2	1.00	0.00
H	28	ADJUST AUTOMATIC TIMING SYSTEM	11	1	1.00	0.00
G	20	REPAIR FENCES	12	4	1.25	0.50
G	18	REPAIR DRIVEWAYS	13	3	1.33	0.57
I	19	SERVICE AND REPAIR ENGINES OVER 20 HORSEPOWER	14	5	1.60	0.89
F	18	PREPARE SEEDBED FOR VEGETABLE GARDEN	15	5	1.60	0.89
E	20	REMOVE STUMPS	16	6	1.66	0.81
H	19	OPERATE REEL TYPE MOWER	17	3	1.66	0.57
G	10	DIG DRAINAGE DITCHES	18	5	1.80	0.83
F	01	AERATE SOIL	19	6	1.83	1.16
B	07	POST SAFETY PRECAUTIONS	20	4	2.00	1.41
G	08	CONSTRUCT COMPOST BIN	21	1	2.00	0.00
G	14	PAINT FENCES AND/OR OUTBUILDINGS	22	3	2.00	1.00
G	26	SWEEP STREETS OR PARKING LOTS	23	3	2.00	1.00
H	16	OPERATE GAS WELDER	24	2	2.00	1.41
H	23	OPERATE AERATION EQUIPMENT	25	6	2.00	1.26
F	23	FILL IN SINKHOLES OR DEPRESSIONS IN LAWNS	26	11	2.09	1.13
E	16	PRUNE AND TRAIN VINES	27	8	2.12	1.35
G	05	CLEAN WALKS,WALLS,PATIOS OR OTHER STONE STRUCTURES	28	6	2.16	1.16
G	04	CLEAN RESTROOMS	29	4	2.25	1.50
G	09	CONSTRUCT FENCES	30	3	2.33	1.52
F	13	APPLY DRY CHEMICALS TO CONTROL SOIL DISEASES	31	9	2.33	1.41
F	03	APPLY FERTILIZER WITH ROOT FEEDER	32	9	2.33	1.11
E	26	TRAIN PLANTS AND SHRUBS	33	6	2.33	0.81
H	21	OPERATE TRACTOR ATTACHED ROTARY MOWER	34	11	2.36	1.02
H	30	USE LAWN ROLLERS	35	8	2.37	1.18
G	03	CLEAN GROUNDS OF LEAVES AND/OR LETTER	36	8	2.37	1.18
E	14	SET BULBS	37	8	2.37	1.18
E	28	TREAT CAVITIES IN TREES	38	5	2.40	1.51
H	14	OPERATE VACUUM RAKE	39	5	2.40	1.34
E	13	PLANT ANNUAL FLOWERS	40	12	2.41	1.31

D	TSK	TASK DESCRIPTION	SEQUENCE NUMBER	NUMBER PERFORMING	AVERAGE VALUE FOR THOSE PERFORMING	STANDARD DEVIATION OF VALUES FOR THOSE PERFORMING
E	10	GIRDLE TREES	41	2	2.50	2.12
C	06	WRITE INSURANCE CLAIMS FOR DAMAGED EQUIPMENT	42	4	2.50	2.38
F	02	APPLY FERTILIZER WITH HOSE PROPORTIONER	43	6	2.50	1.87
F	19	REPLACE TOPSOIL	44	8	2.50	1.06
H	17	OPERATE ELECTRIC WELDER	45	4	2.50	1.73
H	27	OPERATE SNOW BLOWER	46	2	2.50	2.12
G	02	CLEAN DRAINAGE DITCHES AND/OR CULVERTS	47	2	2.50	0.70
I	17	PAINT EQUIPMENT	48	9	2.55	1.23
F	05	APPLY LIME ACCORDING TO SOIL TEST	49	9	2.55	1.50
E	22	REPAIR WORN SPOTS IN LAWN BY RESEEDING	50	9	2.55	1.23
E	21	REPAIR WORN SPOTS IN LAWN WITH SOD	51	9	2.55	1.23
F	20	INSTALL STRUCTURES TO CONTROL SOIL EROSION	52	7	2.57	1.51
H	20	OPERATE PUSH TYPE ROTARY MOWER	53	12	2.58	1.31
I	18	SERVICE AND REPAIR SMALL ENGINES UP TO 20 HORSEPOWER	54	10	2.60	1.64
I	13	CLEAN DRY PESTICIDE EQUIPMENT	55	10	2.60	1.77
F	12	APPLY LIQUID CHEMICALS TO CONTROL SOIL DISEASES	56	10	2.60	1.50
F	10	APPLY LIQUID CHEMICALS TO CONTROL SOIL INSECTS	57	10	2.60	1.34
E	09	CULTIVATE PLANTS AND FLOWER BEDS	58	10	2.60	1.42
F	11	APPLY DRY CHEMICALS TO CONTROL SOIL INSECTS	59	8	2.62	1.30
B	10	ENFORCE SAFETY REGULATIONS	60	8	2.62	1.76
H	05	OPERATE CULTIVATOR	61	8	2.62	1.18
H	01	CALIBRATE DRY APPLICATORS	62	11	2.63	1.56
G	21	REPAIR WALLS	63	3	2.66	1.15
I	09	CLEAN IRRIGATION EQUIPMENT	64	6	2.66	1.36
E	23	RESEED LAWN	65	9	2.66	1.22
I	07	CLEAN FERTILIZER APPLICATORS	66	14	2.71	1.48
I	11	INSPECT AND REPAIR POWER EQUIPMENT	67	13	2.76	1.01
I	03	CHANGE OR CLEAN AIR FILTER IN POWER EQUIPMENT	68	13	2.76	1.23
H	31	OPERATE POST HOLE DIGGER	69	9	2.77	1.30
H	24	OPERATE THATCHING EQUIPMENT	70	9	2.77	1.98
G	07	CONSTRUCT AND/RO MAINTAIN PLANT GROWING STRUCTURES	71	9	2.77	1.09
H	09	OPERATE POWER EDGER	72	5	2.80	1.78
F	21	APPLY MULCH TO CONTROL SOIL EROSION	73	11	2.81	1.77
I	08	INSPECT AND REPAIR DRY PESTICIDE EQUIPMENT	74	12	2.83	1.89
F	08	APPLY LIQUID CHEMICALS TO CONTROL WEEDS	75	13	2.84	1.46
I	10	INSPECT AND REPAIR IRRIGATION EQUIPMENT	76	7	2.85	1.57
I	06	INSPECT AND REPAIR HAND TOOLS	77	14	2.85	1.61
H	02	CALIBRATE LIQUID OR SLURRY %FERTILIZER< APPLICATORS	78	7	2.85	1.67
E	25	THIN AND WEED PLANTS	79	9	2.88	1.45
E	30	TREAT TREE OR PLANT TROUBLES CAUSED BY CULTURAL FACTORS	80	11	2.90	1.30

D	TSK	TASK DESCRIPTION	SEQUENCE NUMBER	NUMBER PERFORMING	AVERAGE VALUE FOR THOSE PERFORMING	STANDARD DEVIATION OF VALUES FOR THOSE PERFORMING
I	05	CLEAN HAND TOOLS	81	16	2.93	1.52
H	22	OPERATE SELF PROPELLED MOWERS	82	8	3.00	1.19
H	07	OPERATE HAND SEEDER	83	10	3.00	1.41
H	06	OPERATE DRILL SEEDER	84	3	3.00	2.00
H	15	OPERATE WAGON BOX SEEDER	85	1	3.00	0.00
I	14	INSPECT AND REPAIR DRY PESTICIDE EQUIPMENT	86	9	3.00	2.12
I	16	INSPECT AND REPAIR LIQUID PESTICIDE EQUIPMENT	87	10	3.00	1.94
F	09	APPLY DRY CHEMICALS TO CONTROL WEEDS	88	11	3.00	1.34
E	08	BRACE OVERLOADED LIMBS OR BRANCHES	89	5	3.00	1.87
E	12	TRIM AND EDGE LAWNS	90	9	3.00	1.80
E	11	MOW LAWNS	91	10	3.00	1.69
A	11	PLAN SECURITY PROGRAMS	92	6	3.00	2.44
E	31	WATER PLANTS AND LAWNS	93	13	3.07	1.75
F	14	SPREAD TOPSOIL	94	12	3.08	1.16
G	25	SET STONES	95	10	3.10	1.28
I	04	GREASE POWER EQUIPMENT	96	13	3.15	1.21
I	02	CHANGE OIL IN POWER EQUIPMENT	97	13	3.15	1.21
E	07	APPLY PROTECTIVE SUBSTANCE TO TREE WOUNDS OR CUT SURFACES	98	13	3.15	1.46
F	16	PREPARE SEEDBED FOR LAWN	99	12	3.16	1.26
F	24	ESTABLISH GRADES %SLOPE<	100	11	3.18	1.77
I	15	CLEAN LIQUID PESTICIDE EQUIPMENT	101	11	3.18	1.66
F	15	APPLY ORGANIC MATTER	102	10	3.20	1.39
E	15	PROTECT PLANTS FROM WEATHER	103	10	3.20	1.54
E	18	PRUNE DEAD FLOWERS	104	9	3.22	1.98
B	06	KEEP RECORDS OF RECEIPTS AND EXPENSES	105	9	3.22	1.30
C	05	FILE ACCIDENT REPORTS	106	4	3.25	2.87
F	17	PREPARE SEEDBED FOR ORNAMENTAL PLANTS	107	11	3.27	1.73
E	29	TREAT NUTRIENT DEFICIENCIES IN PLANTS	108	10	3.30	1.82
C	02	DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	109	6	3.33	1.21
A	14	DEVELOP FERTILIZATION SCHEDULES FOR FLOWERS	110	6	3.33	1.75
G	17	INSTALL SIGNS	111	3	3.33	3.21
E	01	ADD MULCH TO PROTECT NEW SEEDLINGS	112	8	3.37	1.50
F	04	APPLY DRY FERTILIZER	113	16	3.37	1.50
F	07	DETERMINE AMOUNT OF FERTILIAER TO APPLY FROM SOIL TEST RESULTS	114	5	3.40	2.40
E	24	SUPPORT WOODY PLANTS BY GUYING8 STAKING8 OR CABLING	115	10	3.40	1.57
A	10	DEVELOP FERTILIZATION SCHEDULES FOR TREES AND SHRUBS	116	10	3.40	2.17
E	02	ADD MULCH TO CONTROL WEEDS	117	12	3.41	1.37
E	06	APPLY FOLIAR SPRAY	118	12	3.41	1.97
E	19	REMOVE DEAD OR UNWANTED TREES OR SHRUBS	119	14	3.42	1.69
A	05	SCHEDULE LEAVES OR VACATIONS	120	7	3.42	1.90

D	TSK	TASK DESCRIPTION	SEQUENCE NUMBER	NUMBER PERFORMING	AVERAGE VALUE FOR THOSE PERFORMING	STANDARD DEVIATION OF VALUES FOR THOSE PERFORMING
G	01	APPLY SALT TO ICY SIDEWALKS OR STREETS	121	6	3.50	2.07
I	01	CLEANING POWER EQUIPMENT	122	10	3.50	1.95
E	17	PRUNE AND TRIM TREES OR SHRUBS	123	13	3.53	2.02
H	04	OPERATE FRONT END LOADER	124	11	3.54	1.63
B	08	PREPARE AND PAY INCOME TAX OR OTHER GOVERNMENT REPORTS AND TAXES	125	3	3.66	1.52
E	05	APPLY CHEMICALS TO CONTROL DISEASE	126	13	3.69	1.49
A	12	DEVELOP FERTILIZATION SCHEDULES FOR TURF	127	7	3.71	2.49
F	22	INSTALL PLANT MATERIALS TO CONTROL SOIL EROSION	128	11	3.72	1.79
H	03	OPERATE BACK HOE %OR FRONT END LOADER<	129	8	3.75	1.66
I	12	STORE FLAMMABLE CHEMICALS	130	8	3.75	2.25
D	03	DEMONSTRATE USE OF EQUIPMENT OR TOOLS	131	13	3.76	1.69
A	08	PLAN EQUIPMENT MAINTENANCE SCHEDULE	132	11	3.81	1.83
E	04	APPLY CHEMICALS TO CONTROL INSECTS	133	13	3.84	1.67
H	26	OPERATE SNOW PLOW	134	9	3.88	2.52
A	01	DEVELOP JOB DESCRIPTIONS FOR EMPLOYEES	135	10	3.90	2.13
H	10	OPERATE ROTARY TILLER	136	14	3.92	1.43
H	13	OPERATE TRACTOR	137	13	4.00	1.82
H	12	OPERATE SCIL GRINDING EQUIPMENT	138	4	4.00	0.81
G	06	CONSTRUCT AND/OR AMINTAIN BIRD BATHS	139	1	4.00	0.00
G	12	PLAN LIGHTING	140	3	4.00	2.64
A	06	PLAN PURCHASING PROGRAM FOR SUPPLIES NEEDED	141	10	4.00	2.16
A	10	PLAN SAFETY PROGRAMS	142	5	4.00	2.73
A	09	ARRANGE FOR EQUIPMENT REPAIR	143	12	4.00	1.70
B	03	INTERVIEW AND SELECT EMPLCYEES	144	9	4.00	1.93
C	02	CONDUCT EMPLOYEE PERFORMANCE EVALUATION	145	8	4.00	1.92
F	06	TAKE A SOIL SAMPLE	146	8	4.00	2.07
E	27	TRANSPLANT TREES OR SHRUBS	147	13	4.07	2.28
A	02	ASSIGN PERSONNEL TO DUTY POSITIONS	148	14	4.14	1.70
C	03	CONDUCT INVENTORIES OF PLANTS8 SUPPLIES8 AND EQUIPMENT	149	11	4.18	1.40
E	03	INSPECT PLANTS FOR INSECTS AND DISEASES	150	12	4.25	1.21
A	07	ARRANGING FOR TRANSPORTATION OF MATERIALS PURCHASED	151	8	4.25	2.25
H	29	USE HAND TOOLS	152	15	4.26	2.01
H	18	SELECT %AND USE< CORRECT HAND TOOLS AND POWER EQUIPMENT	153	10	4.30	1.82
B	02	DEVELOP OR IMPROVE WORK METHODS OR PROCEDURES	154	16	4.31	1.19
C	01	KEEP EMPLOYEE WORK RECORDS	155	6	4.33	2.16
B	05	PAY ACCCUNTS PAYABLE AND COLLECT ACCOUNTS RECEIVABLE	156	5	4.40	1.67
D	01	CONDUCT ON THE JOB TRAINING	157	12	4.41	1.92
B	04	PARTICIPATE IN STAFF MEETINGS	158	11	4.45	1.96
A	03	ESTABLISH WORK PERFORMANCE STANDARDS	159	14	4.57	1.88
C	04	KEEP ANNUAL DEPRECIATION SCHEDULE	160	3	4.66	3.21

D	TSK	TASK DESCRIPTION	SEQUENCE NUMBER	NUMBER PERFORMING	AVERAGE VALUE FOR THOSE PERFORMING	STANDARD DEVIATION OF VALUES FOR THOSE PERFORMING
B	01	SUPERVISE EMPLOYEES FOR SPECIFIC TASKS	161	13	4.69	1.79
A	04	DETERMINE WORK PRIORITIES	162	14	4.85	1.83
B	09	PREPARE EMPLOYEE PAYROLL	163	2	5.00	1.41
H	08	OPERATE PICKUP TRUCK	164	14	5.21	2.11
D	04	WRITE TRAINING REPORTS	165	3	6.33	1.15

SOUTHERN ASSOCIATION OF COLLEGES AND SCHOOLS
COMMISSION ON OCCUPATIONAL EDUCATION INSTITUTIONS
VOCATIONAL-TECHNICAL EDUCATION CONSORTIUM OF STATES

DUTIES AND TASKS #4

PROJECT# 8888 SURVEY DATA ANALYSIS
OCCUPATIONAL INVENTORY FOR PURPOSIVE STUDY - PURDUE UNIVERSITY

D	TSK	DUTY/TASK DESCRIPTION
A		ORGANIZING AND PLANNING
A	C1	DEVELOP JOB DESCRIPTIONS FOR EMPLOYEES
A	C2	ASSIGN PERSONNEL TO DUTY POSITIONS
A	03	ESTABLISH WORK PERFORMANCE STANDARDS
A	C4	DETERMINE WORK PRIORITIES
A	C5	SCHEDULE LEAVES OR VACATIONS
A	C6	PLAN PURCHASING PROGRAM FOR SUPPLIES NEEDED
A	C7	ARRANGING FOR TRANSPORTATION OF MATERIALS PURCHASED
A	C8	PLAN EQUIPMENT MAINTENANCE SCHEDULE
A	C9	ARRANGE FOR EQUIPMENT REPAIR
A	10	PLAN SAFETY PROGRAMS
A	10	DEVELOP FERTILIZATION SCHEDULES FOR TREES AND SHRUBS
A	11	PLAN SECURITY PROGRAMS
A	12	DEVELOP FERTILIZATION SCHEDULE FOR TURF
A	14	DEVELOP FERTILIZATION SCHEDULES FOR FLOWERS
B		DIRECTING AND IMPLEMENTING
B	C1	SUPERVISE EMPLOYEES FOR SPECIFIC TASKS
B	02	DEVELOP OR IMPROVE WORK METHODS OR PROCEDURES
B	C3	INTERVIEW AND SELECT EMPLOYEES
B	C4	PARTICIPATE IN STAFF MEETINGS
B	C5	PAY ACCOUNTS PAYABLE AND COLLECT ACCOUNTS RECEIVABLE
B	C6	KEEP RECORDS OF RECEIPTS AND EXPENSES
B	C7	POST SAFETY PRECAUTIONS
B	C8	PREPARE AND PAY INCOME TAX OR OTHER GOVERNMENT REPORTS AND TAXES
B	C9	PREPARE EMPLOYEE PAYROLL
B	10	ENFORCE SAFETY REGULATIONS
C		INSPECTING AND EVALUATING
C	01	KEEP EMPLOYEE WORK RECORDS
C	C2	CONDUCT EMPLOYEE PERFORMANCE EVALUATION
C	03	CONDUCT INVENTORIES OF PLANTS& SUPPLIES& AND EQUIPMENT

D	TSK	DUTY/TASK DESCRIPTION
C	04	KEEP ANNUAL DEPRECIATION SCHEDULE
C	C5	FILE ACCIDENT REPORTS
C	C6	WRITE INSURANCE CLAIMS FOR DAMAGED EQUIPMENT
C		TRAINING
D	C1	CONDUCT ON THE JOB TRAINING
C	C2	DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION
C	C3	DEMONSTRATE USE OF EQUIPMENT OR TOOLS
C	C4	WRITE TRAINING REPORTS
E		MAINTAINING PLANTS
E	C1	ADD MULCH TO PROTECT NEW SEEDLINGS
E	C2	ADD MULCH TO CONTROL WEEDS
E	C3	INSPECT PLANTS FOR INSECTS AND DISEASES
E	C4	APPLY CHEMICALS TO CONTROL INSECTS
E	C5	APPLY CHEMICALS TO CONTROL DISEASE
E	C6	APPLY FOLIAR SPRAY
E	C7	APPLY PROTECTIVE SUBSTANCE TO TREE WOUNDS OR CUT SURFACES
E	C8	BRACE OVERLOADED LIMBS OR BRANCHES
E	C9	CULTIVATE PLANTS AND FLOWER BEDS
E	10	GIRDLE TREES
E	11	MOW LAWNS
E	12	TRIM AND EDGE LAWNS
E	13	PLANT ANNUAL FLOWERS
E	14	SET BULBS
E	15	PROTECT PLANTS FROM WEATHER
E	16	PRUNE AND TRAIN VINES
E	17	PRUNE AND TRIM TREES OR SHRUBS
E	18	PRUNE DEAD FLOWERS
E	19	REMOVE DEAD OR UNWANTED TREES OR SHRUBS
E	20	REMOVE STUMPS
E	21	REPAIR WORN SPOTS IN LAWN WITH SOD
E	22	REPAIR WORN SPOTS IN LAWN BY RESEEDING
E	23	RESEED LAWN
E	24	SUPPORT WOODY PLANTS BY GUYING& STAKING& OR CABLING
E	25	THIN AND WEED PLANTS
E	26	TRAIN PLANTS AND SHRUBS
E	27	TRANSPLANT TREES OR SHRUBS
E	28	TREAT CAVITIES IN TREES
E	29	TREAT NUTRIENT DEFICIENCIES IN PLANTS
E	30	TREAT TREE OR PLANT TROUBLES CAUSED BY CULTURAL FACTORS
E	31	WATER PLANTS AND LAWNS

D	TSK	DUTY/TASK DESCRIPTION
F		PREPARING AND IMPROVING SOIL
F	01	AERATE SOIL
F	02	APPLY FERTILIZER WITH HOSE PROPORTIONER
F	03	APPLY FERTILIZER WITH ROOT FEEDER
F	04	APPLY DRY FERTILIZER
F	05	APPLY LIME ACCORDING TO SOIL TEST
F	06	TAKE A SOIL SAMPLE
F	07	DETERMINE AMOUNT OF FERTILIAER TO APPLY FROM SOIL TEST RESULTS
F	08	APPLY LIQUID CHEMICALS TO CONTRCL WEEDS
F	09	APPLY DRY CHEMICALS TO CONTROL WEEDS
F	10	APPLY LIQUID CHEMICALS TO CONTRCL SOIL INSECTS
F	11	APPLY DRY CHEMICALS TO CONTROL SOIL INSECTS
F	12	APPLY LIQUID CHEMICALS TO CONTROL SOIL DISEASES
F	13	APPLY DRY CHEMICALS TO CONTROL SOIL DISEASES
F	14	SPREAD TOPSOIL
F	15	APPLY ORGANIC MATTER
F	16	PREPARE SEEDBED FOR LAWN
F	17	PREPARE SEEDBED FOR ORNAMENTAL PLANTS
F	18	PREPARE SEEDBED FOR VEGETABLE GARDEN
F	19	REPLACE TOPSOIL
F	20	INSTALL STRUCTURES TO CONTROL SOIL EROSION
F	21	APPLY MULCH TC CONTROL SOIL EROSION
F	22	INSTALL PLANT MATERIALS TO CONTROL SOIL EROSION
F	23	FILL IN SINKHOLES OR DEPRESSICNS IN LAWNS
F	24	ESTABLISH GRADES %SLOPE<
G		CONSTRUCTING AND MAINTAINING FACILITIES
G	01	APPLY SALT TO ICY SIDEWALKS OR STREETS
G	02	CLEAN DRAINAGE DITCHES AND/OR CULVERTS
G	03	CLEAN GROUNDS OF LEAVES AND/OR LETTER
G	04	CLEAN RESTROOMS
G	05	CLEAN WALKS,WALLS,PATIOS OR OTHER STONE STRUCTURES
G	06	CONSTRUCT AND/OR AMINTAIN BIRD BATHS
G	07	CONSTRUCT AND/RC MAINTAIN PLANT GROWING STRUCTURES
G	08	CONSTRUCT COMPOST BIN
G	09	CONSTRUCT FENCES
G	10	DIG DRAINAGE DITCHES
G	11	DRAIN AND CLEAN POOLS
G	12	PLAN LIGHTING
G	13	MAINTAIN LIGHTING
G	14	PAINT FENCES AND/OR OUTBUILDINGS

D	TSK	DUTY/TASK DESCRIPTION
G	15	PAINT LAWN AND GARDEN FURNITURE
G	16	PAINT LINES ON PARKING LOTS& STREETS AND RECREATIONAL SURFACES
G	17	INSTALL SIGNS
G	18	REPAIR DRIVEWAYS
G	19	REPAIR SIDEWALKS
G	20	REPAIR FENCES
G	21	REPAIR WALLS
G	22	REPAIR PATIO AND LAWN FURNITURE
G	23	CLEAN PATIO AND LAWN FURNITURE
G	24	REPAIR PLAYGROUND EQUIPMENT
G	25	SET STONES
G	26	SWEEP STREETS OR PARKING LOTS
H		OPERATING EQUIPMENT
H	01	CALIBRATE DRY APPLICATORS
H	02	CALIBRATE LIQUID OR SLURRY %FERTILIZER< APPLICATORS
H	03	OPERATE BACK HOE %OR FRONT END LOADER<
H	04	OPERATE FRONT END LOADER
H	05	OPERATE CULTIVATOR
H	06	OPERATE DRILL SEEDER
H	07	OPERATE HAND SEEDER
H	08	OPERATE PICKUP TRUCK
H	09	OPERATE POWER EDGER
H	10	OPERATE ROTARY TILLER
H	11	OPERATE SICKLE BAR MOWER
H	12	OPERATE SOIL GRINDING EQUIPMENT
H	13	OPERATE TRACTOR
H	14	OPERATE VACUUM RAKE
H	15	OPERATE WAGON BOX SEEDER
H	16	OPERATE GAS WELDER
H	17	OPERATE ELECTRIC WELDER
H	18	SELECT %AND USE< CORRECT HAND TOOLS AND POWER EQUIPMENT
H	19	OPERATE REEL TYPE MOWER
H	20	OPERATE PUSH TYPE ROTARY MOWER
H	21	OPERATE TRACTOR ATTACHED ROTARY MOWER
H	22	OPERATE SELF PROPELLED MOWERS
H	23	OPERATE AERATION EQUIPMENT
H	24	OPERATE THATCHING EQUIPMENT
H	25	TRANSFER LIQUID OR SLURRY FERTILIZER FROM NURSE TANK TO APPLICATOR
H	26	OPERATE SNOW PLOW
H	27	OPERATE SNOW BLOWER
H	28	ADJUST AUTOMATIC TIMING SYSTEM
H	29	USE HAND TOOLS

C	TSK	DUTY/TASK DESCRIPTION
H	30	USE LAWN ROLLERS
H	31	OPERATE POST HOLE DIGGER
I		MAINTAINING EQUIPMENT
I	C1	CLEANING POWER EQUIPMENT
I	02	CHANGE OIL IN POWER EQUIPMENT
I	C3	CHANGE OR CLEAN AIR FILTER IN POWER EQUIPMENT
I	C4	GREASE POWER EQUIPMENT
I	C5	CLEAN HAND TOOLS
I	C6	INSPECT AND REPAIR HAND TOOLS
I	C7	CLEAN FERTILIZER APPLICATORS
I	C8	INSPECT AND REPAIR DRY PESTICIDE EQUIPMENT
I	C9	CLEAN IRRIGATION EQUIPMENT
I	10	INSPECT AND REPAIR IRRIGATION EQUIPMENT
I	11	INSPECT AND REPAIR POWER EQUIPMENT
I	12	STORE FLAMMABLE CHEMICALS
I	13	CLEAN DRY PESTICIDE EQUIPMENT
I	14	INSPECT AND REPAIR DRY PESTICIDE EQUIPMENT
I	15	CLEAN LIQUIC PESTICIDE EQUIPMENT
I	16	INSPECT AND REPAIR LIQUID PESTICIDE EQUIPMENT
I	17	PAINT EQUIPMENT
I	18	SERVICE AND REPAIR SMALL ENGINES UP TC 20 HORSEPOWER
I	19	SERVICE AND REPAIR ENGINES OVER 20 HORSEPOWER

Job Title Analysis for Selected Job Titles in Horticulture

Tools Used by Respondents Expressed as Means

Tool	Mean
1) Aerators	.45
2) Axe or hatchet	.90
3) Back hoe	.40
4) Belts, slings, and ropes	.45
5) Block and tackle	.15
6) Can shears	.55
7) Chain saws	.75
8) Chemical masks	.45
9) Climbing Hooks	.10
10) Come-along	.25
11) Cultivator	.70
12) Disc	.50
13) Disc-harrow	.35
14) Fertilizer applicator	.90
15) File	.70
16) Front end loader	.80
17) Grader blade	.55
18) Grafting and budding knife and chisel	.10
19) Hammer and maul	.55
20) Harrow	.30
21) Hedge shears	.85
22) Herbicide applicator	.75
23) Hoe	.80
24) Irrigation equipment	.45
25) Jack	.45
26) Ladder	.85
27) Lawn roller	.75
28) Lawn sprinkler	.85
29) Mallet	.40
30) Metal hose extension with water breaker head	.55
31) Mower	.85
32) Pesticide applicator	.75
33) Plow	.40
34) Pole pruner	.85
35) Portable cement mixer	.25
36) Post-hole digger	.75
37) Power edger	.35
38) Power rake	.60
39) Pruning knife	.70
40) Pumps	.45
41) Rakes	.90
42) Roller	.55
43) Rotary hoe	.20
44) Rotary tiller	.85
45) Rule or tape	.95
46) Saw, orchard	.55
47) Saw, pruning	.85
48) Saw, pole	.75
49) Saw, tapered	.20
50) Seed applicator	.70
51) Shear, hedge	.80
52) Shear, lopping	.80

Tool	Means
53) Shear, pruning	.80
54) Shovels	.90
55) Small hand cultivators and hoes	.70
56) Sod-cutting machine	.65
57) Sod plugger	.30
58) Soil probe or auger	.65
59) Soil shredder	.30
60) Soil testing kit	.40
61) Spading forks	.70
62) Tractor	.90
63) Truck	.90
64) Vac-sweep	.30
65) Weed and grass cutter	.70
66) Welding machine	.25
67) Weeder	.30
68) Wheel-barrow	.95
69) Wire stretcher	.20
70) Wrenches	.70